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SUMMARY OF SPOTTED, SPINNER, UNIDENTIFIED AND OTHER IDENTIFIED PORPOISE SIGHTINGS REPORTED BY COMMERCIAL TUNA VESSELS FISHING IN THE TROPICAL CENTRAL AND WESTERN PACIFIC OCEAN

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Paul Patterson and Franklin Alverson

ADMINISTRATIVE REPORT LJ-86-06C

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Summary of Spotted, Spinner, Unidentified and other Identified Porpoise Sightings Reported by Commercial Tuna Vessels Fishing in the Tropical Central and Western Pacific Ocean

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April 1986

This report was prepared by Paul Patterson and Franklin Alverson under a purchase order for the National Marine Fisheries Service, Southwest Fisheries Center, La Jolla, California. The statements, findings, conclusions and recommendations herein are those of the author(s) and do not necessarily reflect the views of the National Marine Fisheries Service. Dr. William F. Perrin of the Southwest Fisheries Center served as National Marine Fisheries Service supervisor for this project.

Administrative Report LJ-86-06C

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SUMMARY OF SPOTTED, SPINNER, UNIDENTIFIED AND OTHER IDENTIFIED PORPOISE SIGHTINGS REPORTED BY COMMERCIAL TUNA VESSELS FISHING IN THE TROPICAL CENTRAL AND WESTERN PACIFIC OCEAN

By Paul Patterson and Frankin Alverson
Living Marine Resources, Inc.

In the mid-1970's United States purse seiners, under charter to the Pacific Tuna Development Foundation, began exploring the central and western Pacific Ocean for tuna. The reports for these charters recorded sightings of porpoise in the area and are summarized in Alverson, 1981. The recording of porpoise sightings was sporadic as it was of low priority for the observers on the charter cruises. Porpoise sightings reported during the charters for 1982 (Bailey and Souter, 1982) and 1983 (Lambert, 1984) are attached as Appendix 1.

In the early 1980's a tuna fishery had developed in the area and attracted a large fleet of vessels from the eastern Pacific fishery. In 1981 the Porpoise Rescue Foundation (PRF) technical staff made a request of the skippers fishing in the new area to record data on sightings of porpoise, especially spotteds, spinners, streakers and common dolphins (whitebellies). The skippers were asked to record the sighting information in their bridge logs and when the logs were processed after each trip at Living Marine Resources (LMR), the sighting information would be recovered.

Several skippers were personally given copies of the NOAA publication, "Whales, Dolphins and Porpoises of the Eastern North Pacific and Adjacent Arctic Waters, a Guide to Their Identification," to stimulate their awareness of PRF's desire to collect porpoise sighting data from the central and western Pacific. However, the voluntary recording of sighting data from an area where the fishery does not involve porpoise resulted in only a few persons taking the extra time to record data on sightings. Discussions

with various skippers indicated porpoise were commonly seen in the new fishery area but were seldom recorded.

There were approximately 632 fishing trips made in the central and western Pacific from 1981 through 1984, for which 463 logbooks have been processed by LMR. To date, data have been recovered from logbooks for only five fishing trips by three vessels. Discussions with the skippers and navigators for the five trips indicated that sightings were not recorded all the time; thus the sightings recorded in their bridge logs do not represent all the porpoise seen during the five trips. However, the data recorded are informative on types of porpoise sighted and allows some idea of distribution.

The sightings recovered from bridge logs are summarized by species in Tables 1 through 3, along with notes from a few skippers and navigators on sightings they did not record.

Spotted porpoise sightings were recorded on 12 occasions during four fishing trips for three vessels between 1981 and November 1983. Sightings have been recorded from 0°S to 10°N latitude and 142°E to 163°W longitude (Table 1). The additional sightings' information from interviews occurred in this same area.

Spinner porpoise sightings were recorded on six occasions during four fishing trips by three vessels. Sightings hve been recorded from 6°S to 6°N latitude and 142°E to 162°W longitude (Table 2).

Sightings of unidentified and other identified porpoise were recorded on 12 occasions during four fishing trips by three vessels. Sightings have been recorded from 5°S to 5°N latitude and 140°E to 162°W longitude (Table 3).

Sea surface temperatures recorded in the bridge log for the same days of porpoise sightings were 84° to 85°F.

The sightings reported here are plotted in Figures 1 through 3, which are Figures 1, 3 and 6 from Alverson, 1981.

Examination of the sightings plotted in Figures 1-3 reveal nothing of an exceptional nature or unexpected. They do augment and fill in some of the gaps in distribution reported by Miyazaki and Wada, 1978, Alverson, 1981, Bailey and Souter, 1982, Lambert, 1984, Au, et al., 1980 and others: those for both spotted and spinner dolphin, Figures 1-2, record sightings in the interval 160°W-180°W and 2°N-10°N latitude, where Alverson, 1981 recorded none. However, these merely reinforce the fact that spotted, spinner and striped dolphin have a trans-Pacific distribution in the tropical latitudes.

The sightings in the 160°-180°W longitude during 1983 are consistent with the environmental changes in the area caused by the El Niño condition which was in effect at the time (Anon., 1984a and 1984b). The depth to the top of the thermocline decreased appreciably between September 1982 through 1983 along the equator in the vicinity of 160°W and 165°W. At the same time there was a major shift in United States purse seine fleet effort from the eastern to the central and western Pacific with a sharp drop in catch in the former area and a sharp rise in the latter (Herrick and Koplin, 1984). When conditions are favorable for the occurrence of tunas in abundance in tropical waters, it is safe to assume that dolphins are also present.

The method to collect data on porpoise sightings in the central and western Pacific is too casual to produce significant amounts of data. The skippers and navigators fishing in the central and western Pacific need to be personally contacted after each trip and encouraged to record sighting information. However, our experience with these parties indicates that information is very difficult to obtain.

A systematic interview of skippers and navigators who have been fishing out west could produce qualitative information on species and probable distribution. Both methods to retrive sighting data will require a substantial amount of effort with no guarantees.

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SPOTTED PORPOISE SIGHTINGS IN CENTRAL AND WESTERN PACIFIC
RECORDED IN COMMERCIAL TUNA VESSELS' BRIDGE LOG RECORD

Date	Sighting Vessel	Latitude	Longitude	School Size	Comments
11/23/82	Carolyn M.	10°30'N	166°35'W	60	Small school (84°F).
11/27/82	Carolyn M.	4°55'N	179°12'E	100+	Small school, no fish (84°F).
12/11/82	Carolyn M.	1°00'N	147°30'E	No est.	Small school, no birds, no fish (84°F).
11/16/83	Carolyn M.	0°15'S	150°50'E	2,500	
11/16/83	Carolyn M.	0°25'S	152°05'E	1,000	
11/16/83	Carolyn M.	0°28'S	152°11'E	600	
11/16/83	Carolyn M.	0°53'S	153°00'E	1,000	Two schools.
11/17/82	Ocean Pearl	3°00'N to 2°40'N	164°30'W to 163°15'W	2,000	Large spot of porpoise plus fin-back whales.
?/?/81 1/	Frontier	4°06'N	144°57'E	500	Spotted porpoise
?/?/81	Frontier	4°26'N	144°38'E	500	Spotted porpoise
?/?/81	Frontier	6°13'N	142°10'E	300	Mixed spotted and spinner

1/ Data recorded on a separate form without dates included. A check of the vessel's logbook records reveal more than one fishing trip made in area of sightings, thus exact date cannot be determined.

Table 1
(Continued)

Ancillary Data from Interviews with Tuna Vessel Skippers and Navigators Regarding Sighting of Spotted Porpoise in Western Pacific

For Trip Ending				
5/28/83	Carolyn M. Ralph Silva III	4°-5°N 174°-175°E (Vicinity Tuvalu)		Saw several large schools in vicinity Tuvalu, whenever these porpoise show up in vicinity of logs, fishing goes bad.
5/9/83	Ocean Pearl John Medina	60 miles west Ebon Island (Marshalls)	1,000+	Saw large body of porpoise.
5/9/83	John Medina	50-100 miles west Aron Island (Marshalls)		Saw several schools in vicinity.
9-10/83	Patrician Manuel Vargas	3°N-3°S 155°-170°E		Saw several schools of spotted, whitebelly spinners and bottlenose daily.
10/18/83	Manuel Vargas	13°N 174°W		One school, spotted and spinner, three days out of Hawaii heading in from west (i.e. southwest). Large school of porpoise, 400-500 animals with large spot of fish on sonar at 35 fathoms, 3-pole jumpers.
8/3/82	Ocean Pearl Harold Medina	Vicinity Christmas Island 1°-2°N 157°W		Saw good signs of spotteds vicinity Christmas Island on outward-bound leg.

SPINNER PORPOISE SIGHTINGS IN CENTRAL AND WESTERN PACIFIC
RECORDED IN COMMERCIAL TUNA VESSELS' BRIDGE LOG RECORD

Date	Sighting Vessel	Latitude	Longitude	School Size	Comments
3/31/83	Carolyn M.	6°10'S	175°30'W	No est.	Large school of spinners (adults and babies) seen from helicopter (84°F).
4/1/83	Carolyn M.	5°55'S	175°40'W	300	(85°F)
4/1/83	Carolyn M.	5°05'S	175°50'W	600	Good birds, no fish (84.5°F)
11/19/82	Ocean Pearl	2° N 3°50'N	162° W to 168°10'W	150	Saw porpoise-spinners (150) plus whitebellies (1,000).
?/?/81 1/	Frontier	6°13'N	142°10'E	300	Mixed spotted and spinner
?/?/81	Frontier	4°06'N	144°01'E	200	Spinners

1/ Data recorded on a separate form without dates included. A check of the vessel's logbook records reveals more than one fishing trip made in area of sightings, thus exact date cannot be determined.

TABLE 2
(Continued)

Ancillary Data from Interviews with Tuna Vessel Skippers and Navigators Regarding Sighting of Spinner Porpoise in Western Pacific

For Trip Ending				
2/8/83	Carolyn M. Ralph Silva III	No specific locations		Interviewd 3/8/83. Reveals they saw numerous schools of spinners, said he would keep better records in future.
9-10/83	Patrician Manuel Vargas	3°N-3°S	155°-170°E	Saw schools of spotteds, whitebelly spinners and bottlenose daily.
10/18/83	Manuel Vargas	13°N	174°W	One school, spotted and spinners, three days out of Hawaii heading in from west (i.e. southwest) large school, 400-500 animals, with large spot of fish on sonar at 35 fathoms, 3-pole jumpers.

UNIDENTIFIED AND OTHER IDENTIFIED PORPOISE SIGHTINGS IN CENTRAL AND WESTERN PACIFIC RECORDED IN COMMERCIAL TUNA VESSELS' BRIDGE LOG RECORD

Date	Sighting Vessel	Latitude	Longitude	School Size	Comments
11/28/82	Carolyn M.	4°26'N	174°22'E	50	Small school female porpoise (84°F).
12/10/82	Carolyn M.	5°10'N	143°10'E	No est.	Two medium schools (84°F).
12/13/82	Carolyn M.	0°38'S	152°41'E	No est.	Porpoise (85°F).
12/13/82	Carolyn M.	0°38'S	152°00'E	No est.	Small school.
11/16/83	Carolyn M.	0°58'S	153°15'E	1,500	Porpoise
11/17/83	Carolyn M.	2°44'S	151°04'E	700	Porpoise
11/30/83	Carolyn M.	5°40'S	165°45'E	No est.	Porpoise
11/17/82	Ocean Pearl	3°15'N	164°15'W to 165°30'W	50	Small spot of whitebelly porpoise (50) plus two large spots of pilot whales (200 each).
11/19/82	Ocean Pearl	2° N	162° W to 163°10'W	1,000	Saw porpoise-spinners (150) plus whitebellies (1,000).
?/?/81 1/	Frontier	0°58'N	140°05'E	200	Whitebellies
?/?/81	Frontier	1°12'N	155°18'E	500	Bottlenose

1/ Data recorded on a separate form without dates included. A check of the vessel's logbook records reveals more than one fishing trip made in area of sightings, thus exact date cannot be determined.

TABLE 3
(Continued)

Ancillary Data from Interviews with Tuna Vessel Skippers and Navigators Regarding Sighting of Unidentified and Other Identified Porpoise in Western Pacific

For Trip Ending			
5/9/83	Ocean Pearl John Medina	Vicinity Truk Island 7°N 152°E	Saw several large schools of porpoise carrying a good body of tuna.
10/20/83	Patrician Manuel Vargas	3 days from Hawaii coming from western Pacific	Saw one school of porpoise three days out of Hawaii heading in from western Pacific. Large school of porpoise with large spot of fish on sonar at 35 fathoms, 3-pole jumpers.

FIGURE 1

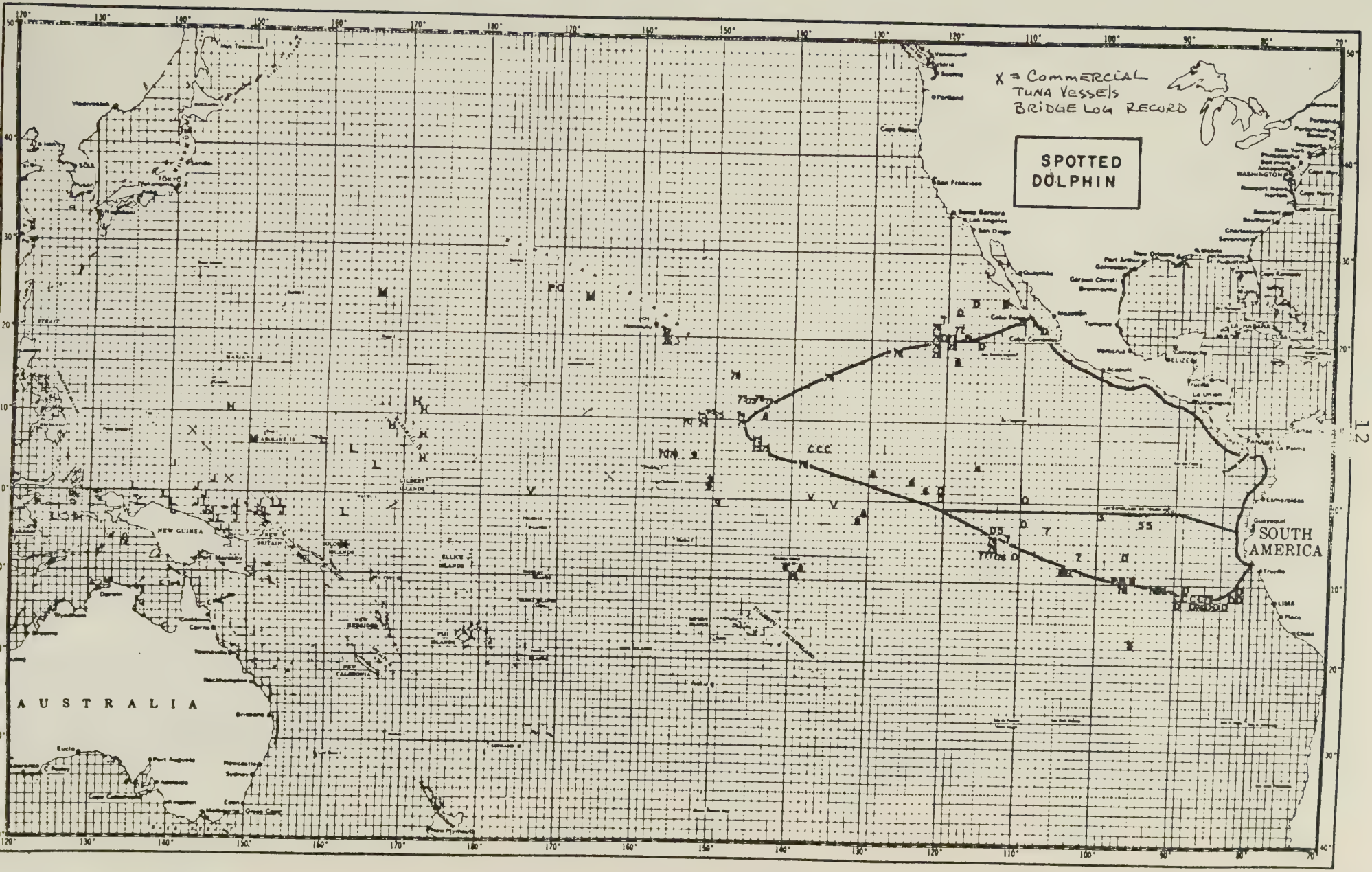
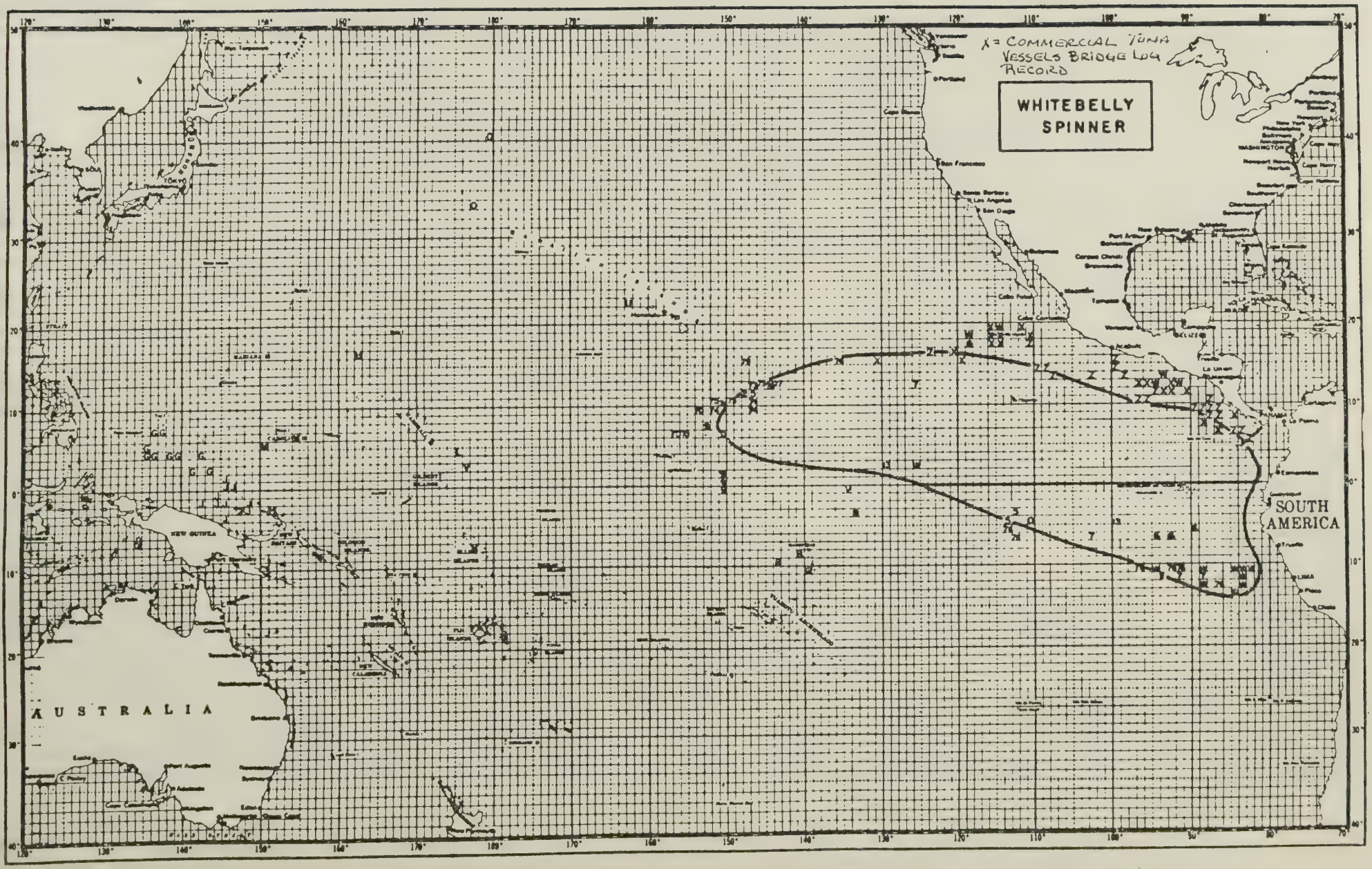


Figure 1, Alverson 1981)

FIGURE 2



(Figure 2, Klawe 1981)

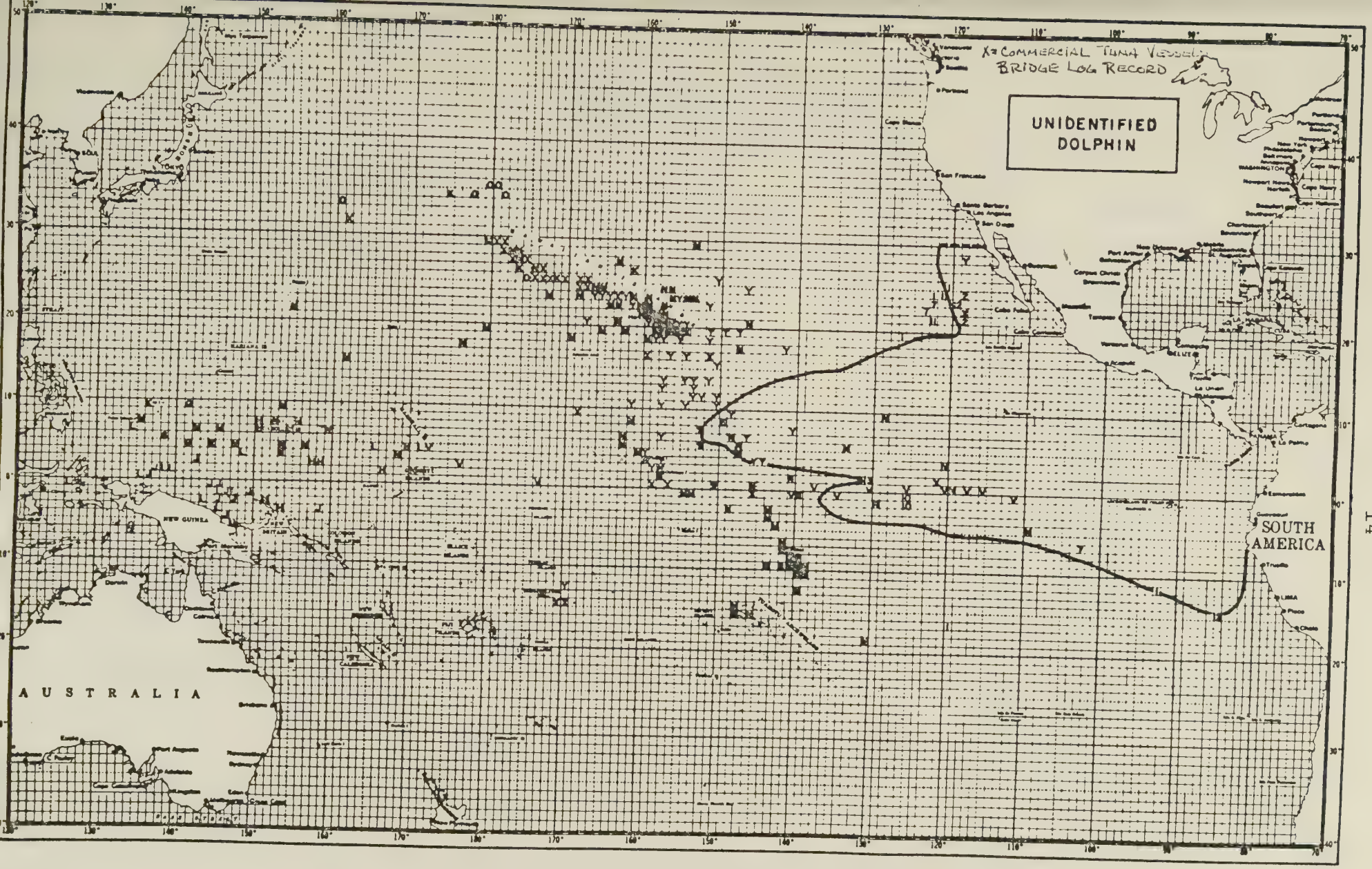


Figure 6, Alverson 1981)

APPENDIX 1

TUNA PURSE SEINE CRUISE REPORT
JUNE 2-AUGUST 10, 1982
M/V WESTERN PACIFIC

By

Kevin Bailey

Douglas Souter

October 1982

APPENDIX I (continued)

M/V WESTERN PACIFIC CHARTER
JUNE 2-AUGUST 10, 1982
MARINE MAMMAL SIGHTING RECORD

Common/Scientific Names	Date	Position	Number	Comments
Spinner porpoise *Stenella longirostris*	6/6/82	31°43'N 152°50'E	15-20	Jumping and spinning at dusk.
	6/11/82	27°41'N 163°36'E	200-250	Jumping and spinning 15 feet into air. Vessel circled school but saw no fish signs.
Streaker porpoise *Stenella caeruleoalba*	6/7/82	31°43'N 157°34'E	500	Remained in tight school while crossing bow. Some standing on tails in wake.
	6/14/82	33°31'N 153°31'E	100-125	Rode on bow for 20 minutes. Some birds, no signs of fish.
Stenella sp.	6/6/82	30°02'N 151°41'E	1,000-1,500	Two large schools, not identified to species. No spinning observed.
Whitebelly porpoise *Delphinus delphis*	6/6/82	31°40'N 152°48'E	20-25	Tight school travelling at approximately 10 knots.
Unidentified porpoise	6/11/82	27°38'N 163°32'E	75-100	Three-four small groups of porpoise in close vicinity.
Sperm whale *Physeter macrocephalus*	6/6/82	29°10'N 163°56'E	10-12	In scattered groups over 10 miles. One calf seen from helicopter.
	6/7/82	31°57'N 157°17'E	6-8	All adults travelling northwest. No associated marine life.
	6/11/82	29°08'N 163°55'E	4	Two pairs separated by five miles. Both travelling slowly to north.
	6/12/82	29°41'N 159°36'E	1	Travelling to west.

APPENDIX I (continued)

MARINE MAMMAL SIGHTING RECORD

Common/Scientific Names	Date	Position	Number	Comments
Sperm whale *Physeter macrocephalus*	6/28/82	5°11'N 150°38'E	1	Drifting on surface. Only sign was blow every 7-12 seconds.
	8/4/82	2°18'N 168°42'E	1	Sleeping on surface. Blow interval of 5-8 seconds. Woke and dove when vessel 1/4 mile away.
Pilot whale *Globicephala* sp.	6/26/82	9°49'N 149°22'E	7-10	Small, tight group travelling slowly. No associated life.
Sei whale *Balaenoptera borealis*	6/27/82	8°39'N 151°32'E	1	Travelling alone. No bird or fish signs.
	7/6/82	5°01'N 162°13'E	3	Feeding amongst two skipjack breezers. Birds also. No set.
	7/23/82	6°56'N 172°02'E	1	Feeding in school of tuna. About 2,000 birds working.
Unidentified whales	6/5/82	26°40'N 149°11'E	1	Seen as brown body diving.
	6/5/82	27°18'N 149°48'E	1	Jumped once and disappeared. Possibly a pilot whale.

APPENDIX 2

TUNA PURSE SEINE CRUISE REPORT
JULY 21-NOVEMBER 9, 1983
M/V JO ANN
FINAL REPORT

BY JAMES F. LAMBERT

JANUARY 1984

APPENDIX 2 (continued)

M/V JO ANN CHARTER
JULY 21-NOVEMBER 9, 1983
MARINE MAMMAL SIGHTING RECORD

Common/Scientific Name	Date (1983)	Position		Number	Comments
Bottlenose Dolphins *Tursiops truncatus*	07/22	18°55'N	155°82'W	12-20	Two miles off Kalae Point, Hawaii.
	07/26	21°45'N	160°87'W	6	North edge of bank, Kaula Island.
	07/27	22°38'N	161°05'W	6-8	Near 30 fathom bank.
	07/28	23°04'N	162°01'W	5-8	On Nihoa bank.
	07/29	23°11'N	163°09'W	6-10	On 33 fathom bank between Nihoa and Necker Islands.
	07/30	23°19'N	163°47'W	15-25	Approached vessel.
	07/30	23°21'N	164°37'W	4	Near Necker Island bank.
	07/31	23°37'N	166°02'W	3-6	Near southeast edge of French Frigate Shoals.
	07/31	28°41'N	166°02'W	3-4	Near east edge of French Frigate Shoals.
	08/02	24°36'N	168°07'W	8-15	Near southwest edge of Gardner Pinnacles bank. Rode bow 5 mins.
	08/02	24°46'N	168°09'W	20-30	Rode bow.
	08/02	24°58'N	168°13'W	25-40	40 birds associated. Porpoise rode bow for 15 minutes.

APPENDIX 2 (continued)

M/V JO ANN CHARTER
JULY 21-NOVEMBER 9, 1983
MARINE MAMMAL SIGHTING RECORD

Common/Scientific Name	Date (1983)	Position		Number	Comments
Bottlenose Dolphins *Tursiops truncatus* (cont.)	08/11	26°02'N	173°45'W	20-35	Southeast edge of Lisianski Island bank. School rode bow for 10 minutes.
	08/14	27°56'N	177°58'W	2-5	63 fathoms depth, Nero Seamount.
	08/14	28°22'N	178°20'W	2-2	Rode bow for 5 minutes.
	08/16	28°21'N	178°15'W	8-15	Southeast edge of Kure Island bank.
	08/26	26°13'N	174°03'W	20-50	North edge of Lisianski Island bank. Rode bow for 10 minutes.
	08/26	26°05'N	173°47'W	15-45	Southeast edge of Lisianski Island bank.
	08/26	26°04'N	173°27'W	5-10	North edge of Pioneer bank, 50 fathoms depth.
	08/30	25°28'N	169°36'W	4-6	West edge of Raita bank, 50 fathoms depth.
	08/30	25°16'N	169°26'W	25-50	180 fathoms depth, north edge of Raita bank.
	08/31	24°40'N	167°25'W	4-8	550 fathoms depth, northwest of St. Rogatien Bank.

APPENDIX 2 (continued)

M/V JO ANN CHARTER
JULY 21-NOVEMBER 9, 1983
MARINE MAMMAL SIGHTING RECORD

Common/Scientific Name	Date (1983)	Position		Number	Comments
Bottlenose Dolphins *Tursiops truncatus* (cont.)	08/31	24°27'N	167°01'W	30-60	140 fathoms depth, northeast edge of St. Rogatien Bank.
	09/01	23°49'N	166°24'W	2-6	50 fathoms depth, west of French Frigate Shoals. Rode bow 5 mins.
	09/02	23°42'N	164°41'W	30-60	North edge of Necker Island bank.
	09/04	23°14'N	163°09'W	10-20	125 fathoms depth. Rode bow for 10 minutes.
	09/05	21°42'N	160°36'W	3-5	55 fathoms depth, northwest edge of Kaula Island bank.
	10/07	4°42'N	160°29'W	15-25	5.5 miles west of Washington Island, 500 fathoms depth.
	10/09	3°48'N	159°25'W	15-45	3.8 miles southwest of Fanning Island.
	10/16	0°23'S	159°58'W	25-50	2-3 miles east of Jarvis Island, 530 fathoms depth. Yellowfin jumpers in area.
	10/30	5°52'N	162°07'W	20-30	20 fathoms depth, Palmyra Atoll.
Spotted Dolphins *Stenella attenuata*	07/23	19°10'N	156°01'W	15-50	Several dolphins rode bow wave for 15 minutes. 2-3 miles off-shore the island of Hawaii.

APPENDIX 2. (continued)

M/V JO ANN CHARTER
JULY 21-NOVEMBER 9, 1983
MARINE MAMMAL SIGHTING RECORD

Common/Scientific Name	Date (1983)	Position		Number	Comments
Spotted Dolphins *Stenella attenuata* (cont.)	07/24	20°43'N	157°06'W	10-30	Traveling with pilot whales.
	10/10	2°47'N	158°52'W	100-200	Traveling alone, began to avoid vessel at 2 miles.
Whitebelly Spinners *Stenella longirostris*	10/25	5°29'N	162°04'W	300-800	25 miles south of Palmyra Atoll. 25 birds overhead. School avoiding ship at 1 mile.
Pilot Whales *Globicephala sp.*	07/24	20°43'N	157°06'W	10-30	Traveling with spotted dolphins.
	07/28	23°03'N	161°37'W	20-40	Traveling alone.
	08/26	26°13'N	174°04'W	2-5	60 fathoms depth, north end of Lisianski Island bank.
	10/06	4°50!N	161°55'W	35-50	Birds overhead, no signs of fish.
	10/16	0°38'S	160°10'W	10-30	No associated animals.
Unidentified Dolphins	08/08	25°58'N	171°45'W	12-24	Dolphins sighted from ultra-light aircraft.
	08/08	25°35'N	171°49'W	3-10	Dolphins rolling on surface at 0.5 mile from ship.

APPENDIX 2 (continued)

M/V JO ANN CHARTER
JULY 21-NOVEMBER 9, 1983
MARINE MAMMAL SIGHTING RECORD

Common/Scientific Name	Date (1983)	Position		Number	Comments
Unidentified Dolphins (cont.)	08/16	28°21'N	178°26'W	2	Dolphins breaking the surface, avoiding ship.
	09/02	23°38'N	164°53'W	3-25	In the sun, 12 miles northwest of Necker Island.
	10/05	4°49'N	162°10'W	1	Skipper saw dolphin on 20x binoculars.
	10/10	2°26'N	158°39'W	25-70	80 birds overhead. School avoiding ship at 2 miles.
	10/11	2°19'N	158°14'W	30-75	School low in the water, avoiding ship at 2 miles.
	10/15	0°15'N	158°50'W	50-150	Too far to identify.
	10/26	5°48'N	162°04'W	5-15	Crewman sighted dolphins on 7x binoculars.
Sperm Whale *Physeter macrocephalus*	07/26	21°54'N	160°42'W	1	Floating on surface. Dove at distance of 1 mile from ship.
	10/24	4°00'N	163°11'W	2	Several blows seen.

APPENDIX 2 (continued)

M/V JO ANN CHARTER
JULY 21-NOVEMBER 9, 1983
MARINE MAMMAL SIGHTING RECORD

Common/Scientific Name	Date (1983)	Position		Number	Comments
False Killer Whale *Pseudorca crassidens*	07/23	19°26'N	156°02'W	8-20	Whales heading south, passed within 100 yards of ship.
Unidentified Whales	08/02	25°30'N	168°50'W	1	30 foot baleen whale. 100 birds overhead. Small yellowfin and skipjack jumpers.
	08/08	25°36'N	171°53'W	1	Pilot sighted from aircraft.
	08/10	25°38'N	173°20'W	1	40 foot baleen whale. Whale blew twice then dove.
	08/21	28°00'N	175°42'W	2	30 foot baleen whales. Feeding in school of tuna off edge of Pearl and Hermes Reef.
	09/01	23°34'N	166°01'W	1	Skipper saw whale blow once 3 miles from ship.
	10/07	4°40'N	160°23'W	1	Crewman saw 1 blow on horizon.
	10/15	0°10'S	159°44'W	2	Crewman saw 2 whale blows on 20x binoculars.
	10/21	0°19'N	162°26'W	1	15-20 foot baleen whale feeding in area with 1-pole yellowfin.

APPENDIX 2 (continued)

M/V JO ANN CHARTER
JULY 21-NOVEMBER 9, 1983
MARINE MAMMAL SIGHTING RECORD

Common/Scientific Name	Date (1983)	Position		Number	Comments
Unidentified Whales (cont.)	10/27	5°47'N	161°58'W	1	Skipper sighted whale from mast.
	11/03	7°00'N	163°37'W	3-10	Pod of whales dove before identity established.
Monk Seal *Monachus schauinslandi*	07/28	22°55'N	162°10'W	1	Sighted 17 miles southwest of Nihoa Island. No ID marks seen. Seal dove at 50 yards from ship.
	08/07	25°46'N	171°45'W	1	Sighted 1/2 mile off Laysan Island, ID #PF8.
Rough-Tooth Dolphins *Steno bredanensis*	08/03	25°27'N	169°31'W	40-50	Drifting near ship in 100 fathoms on Raita Bank. Skipjack jumpers in the area.
	09/01	23°32'N	166°04'W	30-75	Several 60-ton spots of yellowfin tuna in area. Porpoise sighted just prior to Set #10.